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ABSTRACT

A telephone survey of randomly selected homes was conducted to locate current owners of videocassette recorders (VCRs) for a study of their VCR-associated television viewing of both public (PTV) and commercial (CTV) television, and a one-week TV activity diary was mailed to homes in 16 cities. Analysis of data from 250 completed diaries indicates that: (1) the typical VCR household viewed real-time TV for four hours a day, viewed playback of recorded material for one hour, and recorded an average of 19 minutes a day: (2) over 90 percent of the programs recorded were regular series, movies, and specials, 60 percent of which were broadcast during prime-time hours: (3) public television reach among VCR owners during the week was slightly over 40 percent, with a 9.6 percent share of VCR recording and a 4.5 percent share of playback viewing: (5) combining real-time and playback viewing, VCR owners using PTV viewed 91 percent more public television than the average amount by all PTV viewers: (6) recording and playback of PTV was heaviest during fringe-time periods: and (7) recording of PTV programs seemed to be for time-shift viewing. A summary of other research on VCR use concludes the report. (MER)

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HOME VCR OWNERS' USE OF TELEVISION AND PUBLIC TELEVISION: VIEWING, RECORDING & PLAYBACK

A Report Prepared By

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for

The Office of Communication Research

CORPORATION FOR PUBLIC BROADCASTING

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Highlights

Two-hundred fifty owners of home videocassette recorders (VCRs) were located in 16 cities by random phone survey in the spring of 1979. Like persons who first bought television sets in the late 1940s, these first buyers of VCRs are typically young, affluent, educated professionals. Most owned their VCR for less than a year.

Where basic cable service was available, 21 percent of the VCR owners subscribed. In the eight cities where direct-pay programming was offered by cable or STV, 31 percent of the VCR owners subscribed.

The VCR-TV uses of these households (representing the 1.5 percent of the U.S. homes with a VCR) was reported by a one-week diary.

- The typical VCR household viewed real-time TV for four hours a day, viewed playback of recorded material an additional one hour a day, and recorded an average of 19 minutes of TV a day. Combining these three TV uses (323 minutes), the VCR owner's VCR-TV was in use 11% less than the set of the average U.S. TV household (363 minutes).

- Over 90% of the material videorecorded by VCR owners was regular TV series, movies and specials. 60% of the recording was of programs broadcast or cablecast during prime-time hours.

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- Playback viewing, averaging 7.1 hours a week, was distributed across day-parts similar to the distribution of real-time viewing. One-half hour a week (7.5% of playback viewing) was of prerecorded tapes. Of these tapes, about half were borrowed, half purchased.

- Public television (PTV) reach among VCR owners during the survey week was slightly over 40%.

- Overall PTV share of VCR owners' real-time viewing was 4.1%.

- PTV share of playback viewing was 4.5%.

- PTV share of recording was 9.6%.

- Those VCR owners using PTV spent an average of 163 minutes a week viewing real-time PTV and 47 minutes playing back recorded PTV programs. Combining these two VCR-TV uses, PTV viewers with VCRs viewed 91% more PTV than the average amount of PTV viewed by all PTV viewers.

- Recording and playback of PTV was heaviest during the 5 to 8 PM fringe-time period.

- At least 68 percent of all playback of home-recorded PTV programs was within two days of broadcast, indicating PTV programs were being recorded by VCR owners for time-shift viewing. There was little evidence of library building of PTV shows.

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I. Introduction

Videocassette recorders (VCR's) have been available in the United States consumer electronics market since 1975. VCR's are now marketed in two basic, incompatible formats under 19 brand names. Each format has had three model changes in tape-speed capability in the last two years. And several additional formats of VCR, incompatible with existing machines, are scheduled to reach the marketplace in the next 18 months.

Yet consumer demand for VCR's has increased at a steady rate. As of March 1980, about 1.2 million (1.5%) of U.S. households had a VCR. About 12,000 VCR's were sold each week during the first two months of 1980, an increase of 70 percent over the same period of 1979. By 1984, 5.5 to 6.8 million (6.2 to 7.7%) U.S. homes are conservatively expected to have a VCR.

Why Study VCR Use?

The home use of VCR's raises questions about television viewing. The most important at this early state of VCR adoption is specific to VCR use: Who owns VCR's? How do VCR owners use their recording and playback capability? How does their viewing of real-time television differ from that of those without VCR's? What use do VCR owners make of non-broadcast program sources and pre-recorded tapes, and does this change normal viewing patterns?

The study of VCR use may also give some early indication of audience

response to diversified sources of TV programming. VCR's are part of what might be called "new" television, a group of programming and distribution developments that are altering the established pattern of television service.

Many viewers, about 20 percent of TVHH, now have an expanded choice of TV signals from full-service cable, multipoint distribution systems or subscription broadcasting (STV). Direct satellite-to-home transmission and the videodisc are two additional entries being readied for the TV marketplace.

These "new" delivery systems offer premium program services, programs scheduled by distant-market and "super" stations, and full-time channels of news, sports, religious and children's programming.

Like the VCR, these program and delivery systems present alternatives to real-time networked programming. Analysis of VCR use may help predict the extent and kind of impact these emerging technologies will have on viewing habits.

This report contains the findings of a study of current VCR owners and their VCR-associated television viewing. Its purpose is to present descriptive information in a form which differentiates between use of public (PTV) and commercial (CTV) television.

How This Study Was Conducted

Media Statistics Incorporated phoned over 50,000 randomly selected homes in early 1979 and asked a screening question to discover VCR owners. About 500 VCR homes were located in 16 major metropolitan (SMSA) areas across the United States.

A one-week TV-activity diary similar to the standard viewing diary was mailed to each home during the months of April, May and June 1979.

Multiple-set homes were given a diary for each TV so that all viewing, recording and playback were recorded, even that on sets not connected with

the VCR. A $10 incentive was given for completion of the complex diary. The overall return rate was 55 percent. The in-tab sample for this report is 250 VCR households.

Distribution of these VCR households by market is given in Column A of Table 1. Distribution in this sample is not proportionate to market size or population. There were less than ten respondents in five of the 16 cities.

An estimate of home VCR ownership by market based on the prescreening question (rather than the in-tab sample) is given in Column C.

Table 1: LOCATION OF VCR HOMES IN SAMPLE

City	A Number of Households	B Number of Persons	C Home VCR Ownership*
New York	21	75	2.5%
Los Angeles	48	134	2.?
Chicago	21	77	1.7
Philadelphia	5	16	.9
Detroit	12	39	1.3
Boston	4	14	.7
Washington	17	67	1.3
Dallas	11	39	1.8
St. Louis	6	18	1.1
Baltimore	3	7	.3
Cleveland	22	84	1.2
[illegible]anta	12	39	1.2
Denver	36	116	2.0
Milwaukee	13	47	1.1
San Bernardino	9	26	1.0
Fresno	10	23	1.5
TOTAL	250	841	1.5

*Estimate based on prescreening interview conducted by Mediastat in early 1979. Number is VCR homes as percentage of all interviewed.

Mediastat provided The Corporation For Public Broadcasting (CPB) with data from the individual VCR households responding. These were in two forms, computer tape and printed activity record listings. The printed form is shown in Appendix A to this report. The computerized information is similar though it does not include program titles and comments of the survey respondents.[1]

Analyses for this study were complied by hand tabulation of the printed data and computer analysis of the tape data using the CDC Cyber 170 of Indiana University. Standard library programs and pretested original computer programming were used.

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[1]Mediastat reports that their punchcard data were transferred to the printed activity record sheets. The same punched data was also transferred to tape by Action Surveys, Inc. It is important to note, however, that analyses of these data for this research report found major and minor inconsistencies between the data on tape and that on the printed activity record sheets. These cannot be accounted for by respondent or coding error since such errors should appear in both forms. This study does not report analyses in which such inconsistencies are notable enough to qualify interpretation of results.

II. Owners of Home VCRs

Family Size

The average family size of those VCR-owners responding was 3.3 persons. The breakdown by number in the household is given below.

Table 2: SIZE OF VCR HOUSEHOLDS

Persons in Family	Sampled VCR Families Number	Percent
1	21	8%
2	70	28
3	47	19
4	58	23
5	37	15
6	13	5
7/8	4	2
TOTAL	250	100%

Age

The age of respondents was recorded by groups, and by sex in adult groups.

Table 3: AGE OF PERSONS IN VCR HOUSEHOLDS

Age Group	Men	Women	Men & Women Combined	Percent of Total
0 to 11 years			114	14%
12 to 17			119	14
18 to 24	48	52	100	12
25 to 34	84	69	153	19
35 to 54	140	124	264	32
55 and older	41	35	76	9
TOTAL			826	100%

This sample of VCR owners, therefore, differed from the general TVHH population of the U.S. in the following respects. The VCR homes had about four percent more children, four percent more teenagers and about ten percent more people of 35-54 years of age. There were about fifteen percent fewer one- and two-person households in the VCR group than in the general population.

Cable and Pay-Television

Eighty-three percent of the respondents had neither cable nor pay-TV. Twenty-five homes (10%) in nine cities subscribed to basic cable service. This cable subscription rate is well below the national TVHH average of 19 percent. Thirty-three (13%) respondents subscribed to a premium channel via cable or STV. This is about twice the current national TVHH pay-TV subscription rate. If four categories of video service are used, the distribution for VCR homes was:

Table 4: VCR OWNERS' TELEVISION SERVICE

Service	Percent of Sample
Neither Cable nor Pay	83%
Cable Only	4
Pay-TV Only	7
Both Cable and Pay	6

Table 5 presents cable and pay-TV subscription by market.

Table 5: VIDEO SERVICES AMONG SAMPLE HOMES BY CITY

City	Cable (N)	Cable %	Pay-TV (N)	Pay-TV %
New York	7	33%	6	29%
Los Angeles	6	13	13	27
Chicago			2	10
Philadelphia	2	40	2	40
Detroit				
Boston	1	25	1	25
Washington				
Dallas	1	8		
St. Louis				
Baltimore	1	33	1	33
Cleveland	5	22	4	18
Atlanta	1	8		
Denver				
Milwaukee				
San Bernardino			4	67
Fresno	1	10		
TOTAL	25	10%	33	13%

Number of TV Sets

The VCR homes owned 736 television receivers, an average of 2.9 sets per household. Eighty-five percent were multi-set homes, compared to 50% for total U.S. TVHH. The breakdown by number of sets is:

Table 6: NUMBER OF TV SETS

Number of TV Sets	Percent of Sample
1	15%
2	28
3	26
4	16
5	13
6 to 8	2

Length of VCR Ownership

Of those responding, over 80 percent purchased their VCR in the 18 months before the survey. The breakdown by year of purchase is:

Table 7: VCR PURCHASE DATE

Year of Purchase	Percent of Sample
1975	1%
1976	3
1977	13
1978	58
January to June 1979	25

VCR Brand

Ten respondents (25%) owned 2 or 3 VCR's, with 21 (8%) of the VCR machines in multiple-VCR homes. The distribution of VCR ownership by brand among responding homes was:

Table 8: VCR BRAND

Brand	Number	Percent of Sample
RCA	88	33%
Sony	49	19
Magnavox	30	11
Panasonic	25	10
Zenith	21	8
Toshiba	12	5
Quasar	11	4
Others	27	10
TOTAL	263	100%

III. Home VCR Use

Types of VCR-TV Use

Besides the viewing of available real-time television, owners of home VCR's may record, record and view simultaneously, or play back video cassettes. The codes used in the Mediastat data specify 25 different VCR-TV activities. These are listed in Appendix B.

For this report, the 25 activities were grouped into three discrete types of activities and are reported as: 1) real-time viewing, 2) recording, and 3) playing back of recorded material. These activities are reported in number of half-hours. A family recording a pay-cabled movie while simultaneously viewing "Nova," for instance, would be reported as both viewing and recording during those particular half-hours. The playback category includes delayed viewing of off-air or off-cable material and playing of prerecorded cassettes.

Amount of VCR-TV Use

The VCR households viewed real-time television for an average of 4 hours a day and played back an additional hour a day for a total of 5 hours viewing per day. The Nielsen estimate of the average hours per U.S. TVHH per day during April, May and June of 1979 is 6.05 hours.

The typical household in the survey recorded 2.2 hours of material during the survey week, for a daily average of 20 minutes.

Table 9 presents the average amount of VCR-TV use per household during the survey week in number of half-hours for each activity and for each daypart. The daypart "Afterschool (3 PM to 4:59 PM)" is reported because of its particular interest to PTV scheduling.

Table 9: AVERAGE AMOUNT OF VCR-TV USE PER HOUSEHOLD PER WEEK (in half-hours)

	Viewing*	Recording	Playback**	All Activities Combined
Daytime (6 AM to 2:59 PM)	13.7	0.5	3.2	17.4
Afterschool (3 PM to 4:59 PM)	5.3	0.3	1.6	7.3
Fringe Time (5 PM to 7:59 PM)	14.5	0.7	3.1	18.3
Prime Time (8 PM to 10:59 PM)	19.6	2.6	4.7	26.9
Late Night (11 PM to 5:59 AM)	3.7	0.3	1.6	5.6
All Day	56.8	4.4	14.2	75.5

*Includes all real-time viewing whether off-air or off-cable.
**Includes both delayed viewing of material recorded by owner and playing of prerecorded cassettes.

Table 10 presents VCR Owners' distribution of VCR-TV among day parts. Sixty percent of all recording was done during prime time while about one-third of viewing and playback occurred during these hours. The share of playback was proportionately higher than viewing during late-afternoon and late-night hours. With these exceptions, however, VCR owners distributed their recording and play-back activity in patterns and amounts similar to their TV viewing.

Table 10: VCR-TV USES BY DAYPARTS FOR EACH ACTIVITY (Reported in Percent)

Daypart (Percent of 24 hr. Day)	Viewing	Recording	Play-back	All Activities Combined
Daytime (6 AM to 2:59 PM)(37.5%)	24.1%	12.5%	22.6%	23.1%
Afterschool (3 PM to 4:59 PM)(8.3%)	9.4	6.6	11.5	9.6
Fringe Time (5 PM to 7:59 PM)(12.5%)	25.5	15.7	21.7	24.3
Prime Time (8 PM to 10:59 PM)(12.5%)	34.4	59.1	33.1	35.6
Late Night (11 PM to 5:59 AM) (29.2%)	6.6	6.1	11.1	7.4
	100.0%	100.0%	100.0%	100.0%

Table 11 indicates how VCR owners divided their time among the three activities. Three-fourths of the VCR-TV use was viewing, about 19 percent was playback, 6 percent recording.

The breakdown by activity within each daypart shows this proportion remained constant with two exceptions. The percentage of viewing was lower and playback higher during the late-night and early-morning hours. And the share of recording was lowest in day-time and fringe-time hours, highest during prime time.

Table 11: VCR-TV USES FOR EACH DAYPART

(Total half-hours)	Daytime 6 AM-2:59 PM	After-school 3 PM-4:59 PM	Fringe-time 5 PM-7:59 PM	Prime-time 8 PM-10:59 PM	Late Night 11 PM-5:59 AM	All Day
Viewing (14,018)	78.2%	73.3%	79.2%	72.7%	66.8%	74.6%
Recording (1,174)	3.2	4.0	3.8	9.7	4.8	6.2
Playback (3,614)	18.6	22.7	17.0	17.6	28.4	19.2
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 12 shows how the three VCR-TV activities were distributed for each city within the survey. No pattern based on market rank or geography emerged. Philadelphia and Fresno owners spent 25 percent of their VCR-TV time playing back recorded material. Boston VCR owners spent the smallest share of VCR-TV time recording.

Table 12: VCR-TV USES FOR EACH CITY

City (Total half-hours)	Viewing	Recording	Playback
New York (1,904)	73%	6%	21%
Los Angeles (3,552)	71	7	22
Chicago (1,390)	77	7	16
Philadelphia (416)	70	5	25
Detroit (643)	80	2	18
Boston (332)	84	9	7
Washington (1,325)	78	4	18
Dallas (1,222)	82	5	13
St. Louis (435)	79	8	13
Baltimore (206)	69	9	22
Cleveland (1,560)	75	8	17
Atlanta (801)	74	5	21
Denver (2,529)	77	6	17
Milwaukee (1,209)	69	6	25
San Bernardino (719)	66	12	22
Fresno (563)	72	4	24
16 Cities Combined (18,806)	74.6%	6.2%	19.2%

Types of Programs Recorded

Counting each program recorded rather than each half-hour of recording, and categorizing the recorded programs by broad type, the following distribution was found:

Table 13: TYPE OF PROGRAMS RECORDED

Program Category	Percent of Programs Recorded
TV Series	58.6%
Movies	27.0
Other Specials	11.2
Sports	2.9
Children's	0.3

In all but 2.4 percent of these instances, the source of the recorded signal was noted as a broadcast station.

Half the recording was done while no one was viewing television. Twenty-five percent of the programs recorded were recorded while viewing the same program, 25 percent while viewing a different program than that being recorded.

Types and Source of Programs Played Back

Combining respondents of all cities, 92 percent of the play-back time was spent viewing owner-recorded material and 7.5 of play-back time was reported as viewing of purchased, rented or borrowed cassettes.

There are market-specific differences, however. The distribution of play-back material by source in half-hours is given for each city in Table 15.

Using the same categories as in Table 13 and again counting instances of playback rather than the amount of time, respondents distributed their play-back of owner-recorded viewing by program type in the following pattern:

Table 14: TYPE OF PROGRAMS PLAYED BACK

Program Category	Percent of Programs Played Back
TV Series	59.9%
Movies	23.3
Other Specials	12.7
Sports	2.6
Children's	1.6

Source of Prerecorded Cassettes

The distribution of play-back time by source of material for each daypart is given in Table 16. Variations are slight; the most notable being the concentration of viewing of prerecorded material in prime time and of time-shift viewing in daytime hours.

Table 15: PLAYBACK TIME DISTRIBUTED BY SOURCE FOR EACH CITY (in Percent)

City	Owner Recorded			Pre-Recorded		
	Off-Air	Cable (Only) Channel	Pay-TV	Bought-Given	Rented	Borrowed
New York	80%	1%	11%	3%		5%
Los Angeles	90	2	4	2	0%	3
Chicago	90		2	2	6	
Philadelphia	89		11			
Detroit	80			9		11
Boston	100					
Washington	96			1		3
Dallas	95			3		3
St. Louis	58					
Baltimore	61		30		9	
Cleveland	82	1	5	3		9
Atlanta	85			12		3
Denver	93			5		2
Milwaukee	93			1		6
San Bernardino	57		25	14	1	3
Fresno	100					
All Markets Combined	87.6%	0.6%	4.3%	3.4%	0.6%	3.5%

Table 16: PLAYBACK TIME DISTRIBUTED BY SOURCE OF PLAYBACK PROGRAMS FOR EACH DAYPART

(Number of half-hours)	Owner Recorded Off-Air	Owner Recorded Cable Only or Pay-TV	Prerecorded (Bought, Given or Borrowed)
Daytime (6 AM - 2:59 PM)(977)	96%	1%	3%
Afterschool (3 PM - 4:59 PM)(415)	92	2	6
Fringe Time (5 PM - 7:59 PM)(817)	90	6	4
Prime Time (8 PM - 10:59 PM)(1,306)	81	7	12
Late Night (11 PM - 5:59 AM)(408)	81	9	10
All Dayparts Combined (3,923)	87.6%	5.0%	7.4%

Sample Titles of Prerecorded Cassettes

Many diary entries for prerecorded material played back did not give titles.

Among those given for purchased cassettes were:

M.A.S.H.	Oh God	Star Wars
Fantastic Voyage	Patton	Hello, Dolly
Harold & Maude	Groove Tube	The Thing
Deep Throat	Smokey & The Bandit	Rocky
Auntie Mame	Days of the Animals	Hizzoner
Cartoon		

Among the titles listed as borrowed:

Love Bug	Citizen Kane	The End
Annie Hall	It's a Great Life	Turning Point
Rabbit Test	The Sailor Who Fell . . .	Coming Home
Julia	Aliens	Slapshot
Coma	Steve Martin's Absent-minded Waiter	Great Planet Earth
Rocky Horror	Animal House	Spy Who Loved Me
B.J. & The Bear	Woodstock	Silver Streak
Planet of The Apes	Wizard of Oz	House Calls
Marathon Man	Amos 'n' Andy	USC Gymnastics
Cheap Detective		Rose Bowl

IV. VCR Owners' Use of Public Television

This section presents public television's (PTV) share of the audience among the VCR owners for the VCR-TV activities and day parts reported in the earlier sections.

PTV Reach

The cumulative reach of PTV during the survey week for the 250 VCR-households responding was 41.6 percent. There was no viewing, recording or playing back of PTV programs in two cities, Baltimore and San Bernardino. If these two markets are not included, the PTV weekly reach was 43.6 percent.

Table 17 indicates the PTV reach for each market and also the overall average share of VCR-TV use for PTV. The average weekly PTV share for the 14 markets combined was 4.5 percent. That is, 4.5 percent of all VCR-TV activities of the 238 VCR households were (viewing, recording or playback) of PTV as opposed to commercial television programming.

The highest PTV share among VCR owners was St. Louis, 17.2%, and the lowest was Detroit, 2.4%. Also, PTV reached the highest percentage of users in St. Louis (83%) and lowest in Detroit (15%).

Amount of PTV Viewing

The 104 PTV-Users--those households reporting any viewing, recording or play-back of PTV during the survey week--used an average of 4 hours of PTV and 40.4 hours of commercial television.

The households using no PTV averaged 36.3 hours of commercial television during the survey week. Therefore, those VCR owners who used public television used on the average 4.1 hours more commercial television than those who used no public television.

Table 17: PTV REACH AMONG AND SHARE OF USE BY VCR OWNERS

(VCR-HH)	PTV Weekly Reach	Average Share of All VCR-TV Use
New York (21)	57%	4.1%
Los Angeles (45)	33	3.5
Chicago (21)	62	7.2
Philadelphia (5)	60	5.9
Detroit (13)	15	2.4
Boston (4)	50	7.5
Washington (17)	35	4.6
Dallas (12)	67	4.2
St. Louis (6)	83	17.2
Cleveland (23)	30	3.2
Atlanta (12)	42	2.7
Denver (37)	43	4.6
Milwaukee (13)	38	3.4
Fresno (9)	56	3.5
14 Cities Combined (238)	43.7%	4.5%

Table 18 gives the average amount (in half-hours) and share of PTV use (of PTV-users only) for each market. Households in Boston, Washington and St. Louis reported an average of over five hours of PTV use during the week. Lowest were Fresno, 2 hours, and Atlanta, 2.5 hours. In Philadelphia and Detroit, PTV users spent over 25 percent of their VCR-TV time on PTV, in Dallas and Atlanta PTV shares were lowest.

Table 18: PTV USE BY THOSE VCR OWNERS USING PTV

(HH Using PTV)	Average Number of Half-Hours PTV-Use	Average PTV Share
New York (12)	7	8.8%
Los Angeles (15)	9	11.2
Chicago (13)	8	9.2
Philadelphia (3)	9	25.7
Detroit (2)	8	26.8
Boston (2)	13	12.7
Washington (6)	11	13.5
Dallas (8)	7	6.3
St. Louis (5)	16	16.5
Cleveland (7)	7	10.5
Atlanta (5)	5	5.5
Denver (16)	8	12.0
Milwaukee (5)	9	10.1
Fresno (5)	4	10.1
14 Cities Combined (104)	8.1	

PTV Share by Daypart and Activity

Table 19 indicates VCR owners' share of PTV use for each activity by daypart. The PTV recording share (9.6 percent) for all VCR owners was more than double that of PTV real-time viewing. The PTV share of delayed viewing or playback was 4.5 percent, the same as that for all VCR-TV use combined.

Analyzed by daypart, the PTV share of viewing was highest in the daytime hours, lowest during late-night and early-morning hours when most PTV stations are dark. PTV share for recording was highest during fringe-time hours. During the early summer of 1979 the PBS feed during these hours carried PTV's most popular programs including "Dick Cavett," "Over Easy," "MacNeil/Lehrer," "Washington Week" and "Wall Street Week" (Fridays), and "Nova" (Thursdays).

The PTV share of playback was also highest during fringe hours.

Table 19: PTV SHARE OF VCR-TV USE
(14 Cities, All VCR Owners)

	Viewing (half-hours)	Recording (half-hours)	Playback (half-hours)	Activities Combined (half-hours)
Daytime 6 AM - 2:59 PM	6.1% (207)	1% (1)	4.1% (36)	5.6% (244)
Afterschool 3 PM - 4:59 PM	4.0 (54)	5.5 (4)	3.9 (16)	3.7 (74)
Fringe Time 5 PM - 7:59 PM	3.0 (110)	11.6 (20)	6.4 (50)	4.0 (180)
Prime Time 8 PM - 10:59 PM	3.7 (181)	6.1 (40)	4.9 (58)	3.8 (279)
Late Night 11 PM - 5:59 PM	1.3 (12)	7.5 (5)	0.8 (3)	1.5 (20)
All Dayparts Combined	4.1% (564)	9.6% (70)	4.5% (163)	4.5% (797)

PTV Share for Each City

Table 20 gives PTV shares of VCR-TV use for each of the 14 cities with PTV viewing or recording.

Table 20: PTV SHARE OF HOME VIDEO USE
(All Dayparts Combined)

City (half-hours)	Viewing	Recording	Playback	All Activities
New York (1,904)	4%	10%	4%	4.2%
Los Angeles (3,552)	4	5	1	3.4
Chicago (1,390)	6	9	12	7.3
Philadelphia (416)	7	35	0	6.5
Detroit (643)	1	0	5	2.0
Boston (332)	5	0	50	7.5
Washington (1,325)	5	5	1	4.6
Dallas (1,222)	4	11	3	4.3
St. Louis (435)	9	78	35	17.9
Cleveland (1,560)	1	6	8	2.8
Atlanta (801)	3	5	1	2.4
Denver (2,529)	5	5	5	4.6
Milwaukee (1,209)	3	13	3	3.5
Fresno (563)	5	8	0	3.7
14 Cities Combined	4.1%	9.6%	4.5%	4.5%

In Tables 21 through 25, the PTV share of real-time viewing, recording and playback is given for each market for each daypart. These indicate that in some dayparts for some activities, overall PTV performance was dependent on that of only a few cities.

Table 21: PTV SHARE OF HOME VIDEO USE
(Daytime, 6 AM - 2:59 PM)

City	Viewing	Recording	Playback	All Activities
New York	10%			7%
Los Angeles	8			6
Chicago	12		13%	12
Philadelphia	17			12
Detroit				0
Boston	8		100	19
Washington	15			11
Dallas	1			1
St. Louis	8			7
Cleveland	1		9	2
Atlanta	2		3	2
Denver	3	4%	3	3
Milwaukee	4		3	3
Fresno	4			3
14 Cities Combined	6.1%	1%	4.1%	5.6%

Table 22: PTV SHARE OF HOME VIDEO USE
(Afterschool, 3 PM - 4:59 PM)

City	Viewing	Recording	Playback	All Activities
New York	3%			2%
Los Angeles	3	19%		3
Chicago	5		35%	9
Philadelphia	14			13
Detroit				0
Boston	6		100	17
Washington	9			8
Dallas	2			2
St. Louis				0
Cleveland				0
Atlanta				0
Denver	6		23	6
Milwaukee	6			3
Fresno				0
14 Cities Combined	4.0%	5.5%	3.9%	3.7%

Table 23: PTV SHARE OF HOME VIDEO USE
(Fringe Time, 5 PM - 7:59 PM)

City	Viewing	Recording	Playback	All Activities
New York	2%	17%	7%	3%
Los Angeles	5		2	4
Chicago	4	17	19	7
Philadelphia				0
Detroit				0
Boston	1			1
Washington	2		6	2
Dallas	5	13		5
St. Louis	13	77	40	20
Cleveland	2		19	5
Atlanta	1			0
Denver	2	9	6	3
Milwaukee	1			1
Fresno	3			2
14 Cities Combined	3.0%	11.6%	6.4%	4.0%

Table 24: PTV SHARE OF HOME VIDEO USE
(Prime Time, 8 PM - 10:59 PM)

City	Viewing	Recording	Playback	All Activities
New York		14%	7%	6%
Los Angeles	2%	3	2	2
Chicago	5	10	10	6
Philadelphia	1			0
Detroit	3		7	4
Boston	6			5
Washington	3			2
Dallas	7	15	8	7
St. Louis	7	72	36	20
Cleveland	2		1	2
Atlanta	6			4
Denver	7	3	7	6
Milwaukee	4		6	3
Fresno	7			5
14 Cities Combined	3.7%	6.1%	4.9%	3.8%

Table 25: PTV SHARE OF HOME VIDEO USE
(Late Night, 11 PM - 5:59 AM)

City	Viewing	Recording	Playback	All Activities
New York				0%
Los Angeles	2%	14%		2
Chicago	2	33		2
Philadelphia				0
Detroit			33%	4
Boston				0
Washington				0
Dallas	7			4
St. Louis				0
Cleveland				0
Atlanta				0
Denver	3	17		3
Milwaukee			4	1
Fresno				0
14 Cities Combined	1.3%	7.5%	0.8%	1.5%

PTV Programs Recorded

Survey diarists reported the following titles while recording from a PBS-member station during the survey week. Number of mentions is given in parentheses.

Masterpiece Theatre (12)
Movies (12)
Dick Cavett (11)
MacNeil/Lehrer (5)
Great Performances (3)
Mark Russell Comedy (3)
National Geographic Special
Jacques Cousteau
World
ABC News
Washington Week in Review
Monty Python

Nancy Drew (3)
Wall Street Week
Sesame Street (2)
Sleeping Beauty (2)
Soccer (2)
Nova
Firing Line
Evening at Pops
Concert
An Apple, An Orange
Commanders
World at War
Consumer Survival
Special Performance
America at the Movies
Andre Previn
Pinocchio
From China to U.S.
Benny Hill
Midwest Balloon Rally
Over Easy
The Long Search
Isms of America
Royal Heritage

Delayed Viewing of PTV Programs

Survey diarists reported the following titles as programs recorded from PBS-member stations and viewed during the survey week. Number of mentions is given in parentheses. This list does not include borrowed or exchanged tapes, but only those recorded by diarists.

The number of days elapsed between recording and playback is also given. There was no instance of playback more than four days after recording though the structure of the survey diary allowed such entries. The entries in the "Not Given" column cannot be assumed to be programs recorded for library building. Because this was a one-week diary, the VCR owner could record a show on the last day of diary keeping and replay it the following day. This instance of playback one day later would appear in the "Not Given" column.

Given these constraints, however, it is clear that most delayed viewing of PTV programs is short-term time shifting. At least 68 percent of all playback of programs recorded from PTV is within two days of the broadcast.

Table 26: PTV PROGRAMS PLAYED BACK

Title (Mentions)	Days Elapsed Since Recording 0-1	1-2	2-3	3-4	Not Given
Dick Cavett (9)	7	1			1
Masterpiece Theatre (9)	4			1	4
Sesame Street (7)	3	1			3
MacNeil/Lehrer Report (5)	5				
Nancy Drew (2)	2				
Wall Street Week (2)	2				
Nova	1				
Firing Line	1				
Consumer Survival		1			
Shakespeare					1
Evening at the Pops	1				
America at the Movies	1				
Soccer					1
Austin City Limits					1
National Geographic Special	1				
Mark Russel Comedy	1				
Jacques Cousteau	1				
Andre Previn	1				
Pinocchio					1
From China to U.S.		1			
ABC News	1				
Que Pasa USA					1
Benny Hill	1				
Affair in the Air					1
Washington Week in Review					1
Monty Python					1
Isms of America	1				
Baryshnikov at the White House					1
Royal Heritage	1				
TOTAL	35	4	0	1	17
	61%	7%		2%	30%

VCR-Owner Comments about PTV Programs or Scheduling

The Mediastat diary invited open-ended comments. Many of the 89 diarists who wrote some comment complained about the number of reruns during the summer television schedule, about the commercials or about the deterioration of program quality. Seven comments were about PTV. They are quoted here as written.

> "Last week we alternately viewed tapings of 'The Scarlet Letter,' which was a four-night broadcast on Channel 28 (local PBS station), and all the Academy Award nominated movies taped from cable by friends for us."
>
> "I would like to have been able to record 'Wall Street Week' on Channel 13 at 7:30 p.m. also but was unable to."
>
> "Our Video Recorder is broken now . . . When it is working we tape our favorite singers and shows such as 'Saturday Night Live' or Public TV shows we like."
>
> "Sorry our recorder was not functioning properly, but our preference in viewing would be Orson Welles (Shylock, the Jew), any National Geographic, all Jacques Cousteau, all history, English, Indian, American; Pagliacci (first choice), golf, football games, gardening, and we wish someone with a lovely resonant voice would do a book review."
>
> "Our VCR is used mostly for taping ballets on PBS to keep for our library . . . We have a few cassettes reserved for 'adding to' occasionally--for example, Arthur Fiedler's July 4 Boston Pops on the Esplanade. These are saved for our tape library--once in a lifetime performances."
>
> "Shows usually recorded: 'Washington Week,' 'Wall Street Week,' special ballets, operas, etc. . . ."
>
> "We enjoy movies and educational specials. Wanted to tape 'King Tut' but ran out of blank tapes and didn't want to erase what I had used."

V. Summary of Other Research

There have been four other studies of VCR use: 1) Kalba-Bowen Associates in a 1978 survey, questioned 600 persons who owned VCR's; 2) MCA hired Field Research Corporation which interviewed 305 adults in June and July 1978, for use in legal proceedings against Sony; 3) Sony hired Crossley Survey, Inc. which telephoned 998 persons in August 1978 for the same proceedings; and 4) Arbitron interviewed persons in 300 VCR homes in September-October 1978. Although each of these proprietary studies has methodological weaknesses which would lead one to be wary of relying on any one of them, taken together with the Mediastat study, they give a pretty good picture of current VCR use

Time-Shifting

The principal use of the VCR to date is for time-shift viewing. The tape sales figures tend to support this. Kalba-Bowen found that 72% of VCR owners used the machines to tape programs they were unable to watch.

Field found 75.4% of persons' use of the machine was for time-shifting half or most of the time.

Crossley found 96% had used the machines to record programs they otherwise would have missed--82.4% of VCR recording was done while the person was not watching TV or was viewing another channel.

Arbitron found 73% of persons' reasons for buying a VCR was to record while at work, away from home, or asleep or to record one program while viewing another.

Because both major rating services--A.C. Nielsen and Arbitron--now include an indication of VCR use, this time-shift phenomenon should be an asset to the

networks and broadcasters. Shows which would have been missed can now be recorded for later viewing. An audience that was previously unavailable to broadcasting is now viewing, and this delayed viewing is properly attributed in audience reports.

The raw data provided by some of the studies indicates that much of the time-shift activity occurred when no one was watching television in the VCR household, and recordings tended to be of regularly scheduled programs such as the soaps or "Saturday Night Live" when persons are either gone or asleep.

Much of the playback of these kinds of recordings appears to be in non-prime time. Most occur relatively quickly after the recording (almost all within a week). Most of such recordings are viewed only once (usually only by members of that household) and most of the tapes are reused to make other recordings. As such, the time-shift activity tends to expand the audience for television programming.

Program Types Recorded

The majority of programs recorded are regular TV series; the second most common recording is of movies. Arbitron found 43% of the use of those responding was to record TV series, and 36% of their use was to record movies.

Library Building

Of great concern to broadcasters would be the building of libraries of tapes by VCR owners. Given a substantial library, the VCR user could regularly opt for a tape from the library instead of watching a broadcast signal. There appears to be little danger of this use measureably influencing broadcast audience size for the popular series programs.

The Field study found that the VCR owners had an average of 32 cassettes; 54% had fewer than 5 with movies recorded on them; 81% had fewer than 5 with TV programs on them.

Nearly 56% had fewer than 10 tapes in their libraries. If each program is viewed once a year, that would be less than one play per month. The typical "library" is 19 cassettes of which 70% are movies, but 43% of VCR owners have no movies in their library. Crossley found an average of 25 cassettes among its interviewees.

Kalba-Bowen asked the number of times tapes were saved longer than one month. Seventeen percent said never and another 62% had done so ten times or less.

Arbitron found that of recordings recently made, 66.2% of the persons said they would erase the show, 15.7% gave no response and 18.1% intended to keep the recording. However, Arbitron did discover that 56% of the persons report building a library of recordings off TV, mostly of movies and specials. In fact, the recordings that would likely be saved would be tapes of major movies, anthologies or specials such as Gone With the Wind, Patton, and children's specials. Nonetheless, given the number of projected VCR's, cost of tape, growth in population, and demonstrated consumer behavior (as exemplified by several decades of audio recording capability), the broadcaster, for the foreseeable future, appears to have little to fear from the tape library accumulation of present and future VCR owners.

Prerecorded Tapes

Prerecorded tape is also not in heavy use among VCR users. An estimated 1,200,000 prerecorded tapes were sold in 1978 and 1,600,000 tapes were projected to be sold in 1979 (compared to an estimated 8-11,000,000 blank tapes). Total

sales to date would amount to an average of about two prerecorded tapes for every VCR unit. This figure is low partly because the industry is young and most VCR manufacturers have had no affiliated program supplier. An underlying philosophy of most VCR manufacturers has been that consumers will buy the hardware without software being available (Advertising Age, Nov. 13, 1978, p. 76). Software will be made available on a rental or sale basis as the "market dictates" and, eventually, sufficient numbers of units will be sold to make specially produced programs economically feasible. Major movie firms have only recently become involved in sale or rental of tapes. Their marketing efforts could have a major impact on prerecorded tape sales and use.

Arbitron reported that only 21.7% of VCR owners reported using prerecorded material. Of those, 67.7% had bought tapes, 20% borrowed them, 9.2% traded for them and 9.2% kept tapes which came with the machine.

In the Mediastat diary data, 40% of the prerecorded tapes played back were "adult," 6.4% were family movies, 53.6% were other titled movies and shows.

It remains to be seen whether new promotional efforts from program movie packagers will result in substantially increasing the VCR owner's prerecorded tape library. At $50 to $80 per movie, the likelihood of stocking the library with purchased cassettes is not great.

It remains to be seen what the rental market will accomplish. Undoubtedly, exchange clubs, both formal and informal, will affect eventual sale and rental of VCR prerecordings. It is simply too early to speculate about the effect rental of tapes could have on watching broadcast programs. But if an analogy is made with movie (16mm and 8mm) rentals and sale for home use, major growth in VCR prerecorded libraries is unlikely.

Other findings from the studies which may be of interest include the following:

A. Field Study

-58.3% of VCR owners eliminate commercials "sometimes," "rarely" or "never."

-56.1% use fast forward to pass commercials "sometimes," "rarely" or "never."

B. Crossley Study

-89.8% viewed their playback with family members only.

-70.4% viewed recorded program only one time and 57.9% plan no further viewing.

-80% of what is recorded and played back is copyrighted.

-25% of owners use fast forward through commercials in playback.

C. Kalba-Bowen

-66% taped five or fewer programs each week.

-54% watched six or fewer hours of VCR weekly.

-44% watch TV more than before purchased VCR, 41% watch same amount, 15% watch less.

D. Arbitron

-18% used fast forward to skip material during playback.

-61% of the skipped material was commercials,
35.2% boring material,
7.4% time-outs in sports,
5.6% network and station promotions

-80.6% use pause button when recording show; 97.1% had used it to eliminate broadcast commercials.

-28.3% of people interviewed were on cable; 40% of those had pay-TV.

-35.3% of premium-TV subscribers recorded pay TV programs.

Maintenance problems, down time and cost for repairs were not surveyed, though these aspects of consumer satisfaction will undoubtedly influence future VCR purchasing.

VCR User Demographics

Little is publicly known about the demographics of the VCR users. Common sense and the findings of Arbitron suggest that the present owners could be classified as innovators. Many owners of VCR's owned VTR's earlier. Between 4 and 25% of the present owners have more than one VCR.

Accoring to Arbitron, VCR owners are affluent (45.3% had incomes in excess of $30,000); well-educated (66.4% had at least some college); young (36.4% were 18-34); professional/managerial types (38.7%). The unit has yet to become a part of the average household's appliance inventory--in fact, neither Sears nor Montgomery Ward advertised a VCR in their 1979 Christmas Cagalogs, although J.C. Penny did. VCR set penetration is likely to be less than 10 percent of the American households by 1985 and the purchasers are likely to be unrepresentative of the population as a whole.